

**U.S. FISH AND WILDLIFE SERVICE
SPECIES ASSESSMENT AND LISTING PRIORITY ASSIGNMENT FORM**

SCIENTIFIC NAME: *Festuca ligulata*

COMMON NAME: Guadalupe fescue

LEAD REGION: Region 2

INFORMATION CURRENT AS OF: October 2005

STATUS/ACTION:

☐ Species assessment - determined species did not meet the definition of endangered or threatened under the Act and, therefore, was not elevated to Candidate status

☐ New candidate

☒ Continuing candidate

☐ Non-petitioned

☒ Petitioned - Date petition received: May 11, 2004

☐ 90-day positive - FR date:

☐ 12-month warranted but precluded - FR date:

☐ Did the petition requesting a reclassification of a listed species? NO

FOR PETITIONED CANDIDATE SPECIES:

a. Is listing warranted (if yes, see summary of threats below)? Yes

b. To date, has publication of a proposal to list been precluded by other higher priority listing actions? Yes

c. If the answer to a. and b. is "yes", provide an explanation of why the action is precluded.

We find that the immediate issuance of a proposed rule and timely promulgation of a final rule for this species has been, for the preceding 12 months, and continues to be, precluded by higher priority listing actions. During the past 12 months, almost our entire national listing budget has been consumed by work on various listing actions to comply with court orders and court-approved settlement agreements, meeting statutory deadlines for petition findings or listing determinations, emergency listing evaluations and determinations, and essential litigation-related, administrative, and program management tasks. We will continue to monitor the status of this species as new information becomes available. This review will determine if a change in status is warranted, including the need to make prompt use of emergency listing procedures. For information on listing actions taken over the past 12 months, see the discussion of "Progress on Revising the Lists," in the current CNOR which can be viewed on our Internet website (<http://endangered.fws.gov/>).

☐ Listing priority change

Former LP: ☐

New LP: ____

Date when the species first became a Candidate (as currently defined): July 1, 1975

____ Candidate removal: Former LP: ____

____ A – Taxon is more abundant or widespread than previously believed or not subject to the degree of threats sufficient to warrant issuance of a proposed listing or continuance of candidate status.

____ U – Taxon not subject to the degree of threats sufficient to warrant issuance of a proposed listing or continuance of candidate status due, in part or totally, to conservation efforts that remove or reduce the threats to the species.

____ F – Range is no longer a U.S. territory.

____ I – Insufficient information exists on biological vulnerability and threats to support listing.

____ M – Taxon mistakenly included in past notice of review.

____ N – Taxon does not meet the Act's definition of "species."

____ X – Taxon believed to be extinct.

ANIMAL/PLANT GROUP AND FAMILY: Flowering Plants, Poaceae (Grass family)

HISTORICAL STATES/TERRITORIES/COUNTRIES OF OCCURRENCE: Texas, Mexico

CURRENT STATES/ COUNTIES/TERRITORIES/COUNTRIES OF OCCURRENCE:

Brewster County, Texas; Mexico

LAND OWNERSHIP: The only known population in the United States occurs on federal lands in Big Bend National Park (BBNP). The only population known to persist in Mexico occurs on The Maderas del Carmen, a protected natural area owned by CEMEX, a cement manufacturer.

LEAD REGION CONTACT: Susan Jacobsen, 505-248-6641

LEAD FIELD OFFICE CONTACT: Austin Ecological Services Field Office, Bill Seawell, 512-490-0057

BIOLOGICAL INFORMATION

Species Description: Guadalupe fescue is a loosely tufted, slender, 17 to 32 inch tall perennial grass which grows at higher elevations in the Chisos Mountains area (Poole 1989). Flowering for the species is from June to August and coincides with rainfall. The species is wind pollinated. Methods of seed dispersal are not known, and little is known about reproductive biology (Poole 1989).

Taxonomy: Guadalupe fescue (*Festuca ligulata*) is a member of the Poaceae (Grass family) and was described from specimens from the Guadalupe Mountains, Culberson County, Texas (Swallen, 1932). There have been no suggestions for revision of this taxonomy.

Habitat: Currently only known from higher elevations in the Chisos Mountains area. The species occurs on shaded moist slopes on gravelly and sandy loams derived from igneous materials in the pine-oak-juniper woodland community. The monitored population in BBNP occurs in a community where the canopy is currently fairly dense.

Historical Range/Distribution: Guadalupe fescue is known to have occurred historically in the Guadalupe Mountains National Park and BBNP, both in Texas, and two locations (Sierra del Carmen and Sierra del Jardin) in Coahuila, Mexico (Poole 1989).

Current Range/Distribution: There is only one known remaining population in the United States, in BBNP along a trail near Boot Springs. One of the Mexico populations, located in the privately owned Maderas del Carmen, a protected natural area, was verified to persist in 2004 (Joe Sirotnak, BBNP, personal communication, 2004). The status of the Sierra del Jardin population has not been monitored recently (Joe Sirotnak, BBNP, personal communication, 2005).

Population Estimates/Status: The BBNP population is estimated at about 50 individuals in an area covering about 5 acres. Monitoring conducted by BBNP for 13 years indicated a general population decline; however, during the past two years, data indicate the population is stable with good recruitment (Joe Sirotnak, BBNP, personal communication, 2005). We have no estimate of the area in BBNP that meets the criteria for physical habitat, although areas at elevations of greater than 6,000 feet are limited, and all likely areas in the park have been surveyed (Joe Sirotnak, BBNP personal communication, 2005). There may be areas in the Davis Mountains of Texas that meet habitat criteria for the species, but most have been surveyed fairly extensively, and the species has not been found. Larger areas of potential habitat exist in the Guadalupe Mountains in New Mexico and in the mountains of Coahuila, Mexico. It is possible Guadalupe fescue persists in the type locality in Guadalupe Mountains National Park in small numbers but has not been relocated despite several attempts. It is also possible that populations exist in suitable habitat in the Guadalupe Mountains of New Mexico and that additional populations exist in the mountains of Coahuila, Mexico. The small number of individuals and the small area occupied by the BBNP population suggest that additional small populations could exist and not have been found.

THREATS

A. The present or threatened destruction, modification, or curtailment of its habitat or range. The population in BBNP is bisected by a trail and subject to occasional trampling by horses and hikers. The amount of trampling that individual plants can withstand is not known, however, because of the small population size, effects to a few plants could be significant. In addition, grazing by trail animals could reduce reproductive capacity by removing flowers and or seeds from the population and possibly destroy individual plants. Erosion along the trail may also impact the species. Prior trail construction may have reduced the population area. There is some concern that this species may be successional following fire or other disturbance, and that the suppression or reduced incidence of such natural disturbance has resulted in the reduction of areas of suitable habitat for the species. This fescue may be dependent on periodic light fire and

may require active management to persist (Big Bend National Park and U.S. Fish and Wildlife Service 1998). The small area and small number of individuals makes testing this hypothesis risky. The BBNP is not currently actively managing the species with fire

B. Overutilization for commercial, recreational, scientific, or educational purposes. Not known to be a factor threatening the Guadalupe fescue.

C. Disease or predation. The seeds are known to occasionally have a fungus, but it is not known whether this condition is a naturally occurring phenomenon or is a result of handling after seed collection. Seed is collected to provide a seed bank for propagation and reintroduction of the plant if it were to be extirpated from the site and/or for reintroduction into new sites. Not a lot is known about the extent /effects of the fungus. The effect would be on the viability of individual seeds or seed heads.

D. The inadequacy of existing regulatory mechanisms. This species is not state-listed. The National Park Service is obligated to manage all species on their lands, in accordance with the Park Service's Organic Act, but no regulatory prohibitions against impacts to this species are in place. The species is included in a fire plan for BBNP but the fire plan is very recent. Because of the small area and small number of individuals, this issue needs to be addressed carefully. Management of the species is included in no other plan for BBNP.

E. Other natural or manmade factors affecting its continued existence. Low population numbers and restriction to a single known United States population make this species vulnerable to extinction from catastrophic local events, demographic stochasticity, or reduced genetic viability that may render the species less adaptive to adverse change in its environment. (Big Bend National Park and U.S. Fish and Wildlife Service 1998).

CONSERVATION MEASURES PLANNED OR IMPLEMENTED: A Conservation Agreement on Guadalupe fescue signed with BBNP in 1998 expired in April 2005. The Service and BBNP plan to sign a new agreement in April 2006. Many of the actions included in the existing Agreement are being continued. Actions include monitoring, seed banking, fire management, and trail and visitor management.

SUMMARY OF THREATS: Threats include trampling and grazing from human and trail animal disturbance, trail erosion, fungus infection of seeds, lack of written commitment to manage for the species, low population numbers, single location, and possibly fire.

For species that are being removed from candidate status:

___ Is the removal based in whole or in part on one or more individual conservation efforts that you determined met the standards in the Policy for Evaluation of Conservation Efforts When Making Listing Decisions (PECE)?

LISTING PRIORITY:

THREAT			
Magnitude	Immediacy	Taxonomy	Priority
High	Imminent	Monotypic genus	1
		Species	2
		Subspecies/population	3
	Non-imminent	Monotypic genus	4
		Species	5
		Subspecies/population	6
Moderate to Low	Imminent	Monotypic genus	7
		Species	8
		Subspecies/population	9
	Non-imminent	Monotypic genus	10
		Species	11*
		Subspecies/population	12

Rationale for listing priority number:

Magnitude: The magnitude of threat for Guadalupe fescue is moderate to low because the National Park Service is aware of threats and are taking them into consideration in their management activities. Actions performed include population monitoring, fire management, and trail management to minimize disturbance of plants. A seed bank has been established at the National Seed Storage Laboratory, Fort Collins, Colorado to provide material to attempt to restore the population in the event of an unanticipated catastrophic event.

Imminence: Threats to the overall population are non-imminent because of monitoring and other conservation actions at BBNP to address threats to the species.

 X Have you promptly reviewed all of the information received regarding the species for the purpose of determining whether emergency listing is needed? Yes.

Is Emergency Listing Warranted? Emergency listing is not warranted because overall threats to the species are non-imminent and because National Park Service has committed to monitor and manage the plant.

DESCRIPTION OF MONITORING: Annual monitoring is being conducted by BBNP. The monitoring includes numbers of individual plants, age and size profiles, reproductive success, and general community information.

COORDINATION WITH STATES

Indicate which State(s) (within the range of the species) provided information or comments on the species or latest species assessment: Texas Parks and Wildlife Department commented that the species was being managed by BBNP.

Indicate which State(s) did not provide any information or comments: NA

LITERATURE CITED:

Swallen, Jason R. 1932. Five new grasses from Texas. *American Journal of Botany*. 19:436-440.

Poole, J. 1989. Status survey on *Festuca ligulata*. Texas Natural Heritage Program, Texas Parks and Wildlife Department. Unpublished report. U.S. Fish and Wildlife Service, Austin Ecological Services Field Office.

Big Bend National Park and U.S. Fish and Wildlife Service. 1998. Conservation Agreement for *Castilleja elongata* (Tall Paintbrush) and *Festuca ligulata* (Guadalupe Fescue). 17 pp. + Appendices. U.S. Fish and Wildlife Service, Austin Ecological Services Field Office.

APPROVAL/CONCURRENCE: Lead Regions must obtain written concurrence from all other Regions within the range of the species before recommending changes, including elevations or removals from candidate status and listing priority changes; the Regional Director must approve all such recommendations. The Director must concur on all resubmitted 12-month petition findings, additions or removal of species from candidate status, and listing priority changes.

Approve: /s/ Rich McDonald 11/17/2005
Acting Regional Director, Fish and Wildlife Service Date



Concur: _____ August 23, 2006
Director, Fish and Wildlife Service Date

Do not concur: _____
Director, Fish and Wildlife Service Date

Date of annual review: October 2005
Conducted by: Bill Seawell, Austin ES Office